

#### ABSTRACT OF THE DISCLOSURE

The present invention discloses a method of manufacturing a thin film resistor with a moisture barrier by depositing a metal film layer on a substrate and depositing a layer of tantalum pentoxide film overlaying the metal film layer. The present invention also includes a thin film resistor having a substrate; a metal film layer attached to the substrate; and a tantalum pentoxide layer overlaying the metal film layer, the tantalum pentoxide layer providing a barrier to moisture, the tantalum pentoxide layer not overlaid by an oxidation process.